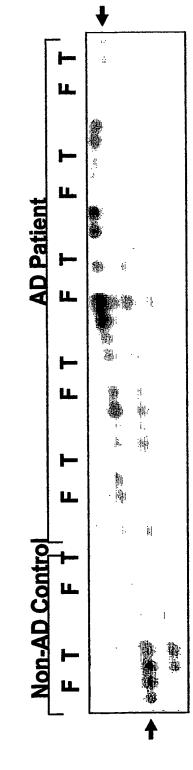
in Alzheimer's Disease Pathology Fig. 1: Identification of Genes Involved

Fig. 2:Identification of differentially expressed genes in a fluorescence differentialdisplay screen



-3/25-

Figure 3: SEQ ID NO. 1

Length: 36 bp

1 AGTTAAGTTT CTTTGTAAAA CACTGATTTT TTCTCC

-4/25-

Fig. 4: Alignment of SEQ ID NO. 1 with human golgin-245 cDNA (GenBank accession number U41740)

-5/25-

Fig. 5: SEQ ID NO. 2: amino acid sequence of human golgin-245, splice variant 1

Length: 2228 aa MFKKLKQKIS EEQQQLQQAL APAQASSNSS TPTRMRSRTS SFTEQLDEGT PNRESGDTQS FAQKLQLRVP SVESLFRSPI KESLFRSSSK ESLVRTSSRE 51 SLNRLDLDSS TASFDPPSDM DSEAEDLVGN SDSLNKEQLI QRLRRMERSL 101 SSYRGKYSEL VTAYQMLQRE KKKLQGILSQ SQDKSLRRIA ELREELQMDQ 151 QAKKHLQEEF DASLEEKDQY ISVLQTQVSL LKQRLRNGPM NVDVLKPLPQ 201 LEPQAEVFTK EENPESDGEP VVEDGTSVKT LETLQQRVKR QENLLKRCKE 251 TIQSHKEQCT LLTSEKEALQ EQLDERLQEL EKIKDLHMAE KTKLITQLRD 301 AKNLIEQLEQ DKGMVIAETK RQMHETLEMK EEEIAQLRSR IKQMTTQGEE 351 LREQKEKSER AAFEELEKAL STAQKTEEAR RKLKAEMDEQ IKTIEKTSEE 401 ERISLQQELS RVKQEVVDVM KKSSEEQIAK LQKLHEKELA RKEQELTKKL 451 QTREREFQEQ MKVALEKSQS EYLKISQEKE QQESLALEEL ELQKKAILTE 501 SENKLRDLQQ EAETYRTRIL ELESSLEKSL QENKNQSKDL AVHLEAEKNK 551 HNKEITVMVE KHKTELESLK HQQDALWTEK LQVLKQQYQT EMEKLREKCE 601 QEKETLLKOK EIIFQAHIEE MNEKTLEKLD VKQTELESLS SELSEVLKAR 651 HKLEEELSVL KDQTDKMKQE LEAKMDEQKN HHQQQVDSII KEHEVSIQRT 701 EKALKDQINQ LELLLKERDK HLKEHQAHVE NLEADIKRSE GELQQASAKL 751 DVFQSYQSAT HEQTKAYEEQ LAQLQQKLLD LETERILLTK QVAEVEAQKK 801 DVCTELDAHK IQVQDLMQQL EKQNSEMEQK VKSLTQVYES KLEDGNKEQE 851 OTKOILVEKE NMILQMREGQ KKEIEILTQK LSAKEDSIHI LNEEYETKFK 901 NQEKKMEKVK QKAKEMQETL KKKLLDQEAK LKKELENTAL ELSQKEKQFN 951 AKMLEMAQAN SAGISDAVSR LETNQKEQIE SLTEVHRREL NDVISIWEKK 1001 LNQQAEELQE IHEIQLQEKE QEVAELKQKI LLFGCEKEEM NKEITWLKEE 1051 GVKQDTTLNE LQEQLKQKSA HVNSLAQDET KLKAHLEKLE VDLNKSLKEN 1101 TFLQEQLVEL KMLAEEDKRK VSELTSKLKT TDEEFQSLKS SHEKSNKSLE 1151 DKSLEFKKLS EELAIQLDIC CKKTEALLEA KTNELINISS SKTNAILSRI 1201 SHCQHRTTKV KEALLIKTCT VSELEAQLRQ LTEEQNTLNI SFQQATHQLE 1251 EKENQIKSMK ADIESLVTEK EALQKEGGNQ QQAASEKESC ITQLKKELSE 1301 NINAVTLMKE ELKEKKVEIS SLSKQLTDLN VQLQNSISLS EKEAAISSLR 1351 KQYDEEKCEL LDQVQDLSFK VDTLSKEKIS ALEQVDDWSN KFSEWKKKAQ 1401 SRFTQHQNTV KELQIQLELK SKEAYEKDEQ INLLKEELDQ QNKRFDCLKG 1451 EMEDDKSKME KKESNLETEL KSQTARIMEL EDHITQKTIE IESLNEVLKN 1501 YNQQKDIEHK ELVQKLQHFQ ELGEEKDNRV KEAEEKILTL ENQVYSMKAE 1551 LETKKKELEH VNLSVKSKEE ELKALEDRLE SESAAKLAEL KRKAEQKIAA 1601 IKKQLLSQME EKEEQYKKGT ESHLSELNTK LQEREREVHI LEEKLKSVES 1651 SQSETLIVPR SAKNVAAYTE QEEADSQGCV QKTYEEKISV LQRNLTEKEK 1701 LLQRVGQEKE ETVSSHFEMR CQYQERLIKL EHAEAKQHED QSMIGHLQEE 1751 LEEKNKKYSL IVAQHVEKEG GKNNIQAKQN LENVFDDVQK TLQEKELTCQ 1801 ILEQKIKELD SCLVRQKEVH RVEMEELTSK YEKLQALQQM DGRNKPTELL 1851 EENTEEKSKS HLVQPKLLSN MEAQHNDLEF KLAGAEREKQ KLGKEIVRLQ 1901 KDLRMLRKEH QQELEILKKE YDQEREEKIK QEQEDLELKH NSTLKQLMRE 1951 FNTQLAQKEQ ELEMTIKETI NKAQEVEAEL LESHQEETNQ LLKKIAEKDD 2001 DLKRTAKRYE EILDAREEEM TAKVRDLQTQ LEELQKKYQQ KLEQEENPGN 2051 DNVTIMELQT QLAQKTTLIS DSKLKEQEFR EQIHNLEDRL KKYEKNVYAT 2101 TVGTPYKGGN LYHTDVSLFG EPTEFEYLRK VLFEYMMGRE TKTMAKVITT 2151 2201 VLKFPDDQTQ KILEREDARL MSWLRSSS

-6/25-

Fig. 6: SEQ ID NO. 3: nucleotide sequence of human golgin-245 cDNA, splice variant 1

Length: 7636 bp

1	GCAACGAAGG	TACCATGGCC	GTTGTCGTCG	CCGCCGCGGC	TCCCGGGGCT
51	GGATGGGGGG	CCGAGGCCAG	CCAGTGGCAC	CCGGAAGAAA	GAGACGCGGC
101	GGCGGCGACG	CCGACACCCT	CAGGACGAGT	GTCCGGACTT	GCCCACAGCC
151	TCAAGGAGGA	GACGGCGAGG	CCCGGCCCCC	GCTGTCCCTG	GTGTAAAGAA
201	GTCGCCGTAG	CCGTCGCGGC	CGGGACTCCC	CGGGCTCTCG	CCCTTCAGGT
251	TTCGTTGACA	CTCAGGACCG	TACGTACGCT	GCGCCATGTT	CAAGAAACTG
301	AAGCAAAAGA	TCAGCGAGGA	GCAGCAGCAG	CTCCAGCAGG	CGCTGGCTCC
351	TGCTCAGGCG	TCCTCCAATT	CTTCAACACC	AACAAGAATG	AGGAGCAGGA
401	CATCTTCATT	TACAGAGCAA	CTTGATGAAG	GTACACCCAA	TAGAGAGTCA
451	GGTGACACAC	AGTCTTTTGC	ACAGAAGCTC	CAGCTCCGGG	TGCCCTCCGT
501	GGAGTCTTTG	TTTCGAAGTC	CGATAAAGGA	ATCTCTATTC	CGGTCTTCTT
551	CTAAAGAGTC	TTTGGTACGA	ACATCTTCCA	GAGAATCCCT	GAATCGACTT
601	GACCTGGACA	GTTCTACTGC	CAGTTTTGAT	CCACCCTCTG	ATATGGATAG
651	CGAGGCTGAA	GACTTGGTAG	GGAATTCAGA	CAGTCTCAAC	AAAGAACAGT
701	TGATTCAGCG	GTTGCGAAGA	ATGGAACGAA	GCTTAAGTAG	CTACAGGGGA
751	AAATATTCTG	AGCTTGTTAC	AGCTTATCAG	ATGCTTCAGA	GAGAGAAGAA
801	AAAGCTACAA	GGTATATTAA	GTCAGAGTCA	GGATAAATCA	CTTCGGAGAA
851	TAGCAGAATT	AAGAGAGGAG	CTCCAAATGG	ACCAGCAGGC	AAAGAAACAT
901	CTGCAAGAGG	AGTTTGATGC	ATCTTTAGAG	GAGAAAGATC	AGTATATCAG
951	TGTTCTCCAA	ACTCAGGTTT	CTCTACTGAA	ACAACGATTA	CGAAATGGCC
1001	CGATGAATGT	TGATGTACTG	AAACCACTTC	CTCAGCTGGA	ACCACAGGCT
1051	GAAGTCTTCA	CTAAAGAAGA	GAATCCAGAA	AGTGATGGAG	AGCCAGTAGT
1101	GGAAGATGGA	ACTTCTGTAA	AAACACTGGA	AACACTCCAG	CAAAGAGTGA
1151	AGCGTCAAGA	GAACCTACTT	AAGCGTTGTA	AGGAAACAAT	TCAGTCACAT
1201	AAGGAACAAT	GTACACTATT	AACTAGTGAA	AAAGAAGCTC	TGCAAGAACA
1251	ACTGGATGAA	AGACTTCAAG	AACTAGAAAA	GATAAAGGAC	CTTCATATGG
1301	CCGAGAAGAC	TAAACTTATC	ACTCAGTTGC	GTGATGCAAA	GAACTTAATT
1351	GAACAGCTTG	AACAAGATAA	GGGAATGGTA	ATCGCAGAGA	CAAAACGTCA
1401	GATGCATGAA	ACCCTGGAAA	TGAAAGAAGA	AGAAATTGCT	CAACTCCGTA
1451	GTCGCATCAA	ACAGATGACT	ACCCAGGGAG	AGGAATTACG	GGAACAGAAA
1501	GAAAAGTCCG	AAAGAGCTGC	TTTTGAGGAA	CTTGAAAAAG	CTTTGAGTAC
1551	AGCCCAAAAA	ACAGAGGAAG	CACGGAGAAA	ACTGAAGGCA	GAAATGGATG
1601	AACAAATAAA	AACTATCGAA	AAAACAAGTG	AGGAGGAACG	CATCAGTCTT
1651	CAACAGGAAT	TAAGTCGGGT	GAAACAGGAG	GTTGTTGATG	TAATGAAAAA
1701	ATCCTCAGAA	GAACAAATTG	CTAAGCTACA	GAAGCTTCAT	GAAAAGGAGC
1751	TGGCCAGAAA	AGAGCAGGAA	CTGACCAAGA	AGCTTCAGAC	CCGAGAAAGG
1801	GAATTTCAGG	AACAAATGAA	AGTAGCTCTT	GAAAAGAGTC	AATCAGAATA
1851	TTTGAAGATC	AGCCAAGAAA	AAGAACAGCA	AGAATCTTTG	GCCCTAGAAG
1901	AGTTAGAGTT	GCAGAAAAAA	GCAATCCTCA	CAGAAAGTGA	AAATAAACTT
1951	CGGGACCTTC	AGCAAGAAGC	AGAGACTTAC	AGAACTAGAA	TTCTTGAATT
2001	GGAAAGTTCT	TTGGAAAAAA	GCTTACAAGA	AAACAAAAAT	CAGTCAAAAG
2051	ATTTGGCTGT	TCATCTGGAA	GCTGAAAAAA	ATAAGCACAA	TAAGGAGATT
2101	ACAGTCATGG	TTGAAAAACA	CAAGACAGAA	TTGGAAAGCC	TTAAGCATCA
2151	GCAGGATGCC	CTTTGGACTG	AAAAACTCCA	AGTCTTAAAG	CAACAATATC
2201	AGACTGAAAT	GGAAAAACTT	AGGGAAAAGT	GTGAACAAGA	AAAAGAAACA
2251	TTGTTGAAAG	ACAAAGAGAT	TATCTTCCAG	GCCCACATAG	AAGAAATGAA
2301	TGAAAAGACT	TTAGAAAAGC	TTGATGTGAA	GCAAACAGAA	CTAGAATCAT
2351	TATCTTCTGA	ACTGTCAGAA	GTATTAAAAG	CCCGTCACAA	ACTAGAAGAG
2401	GAACTTTCTG	TTCTGAAAGA	TCAAACAGAT	AAAATGAAGC	AGGAATTAGA
2451	GGCCAAGATG	GATGAACAGA	AAAATCATCA	CCAGCAGCAA	GTTGACAGTA

-7/25-

		- /			
2501	TCATTAAAGA	ACACGAGGTA	TCTATCCAGA	GGACTGAGAA	GGCATTAAAA
2551	GATCAAATTA	ATCAACTTGA	GCTTCTCTTG	AAGGAAAGGG	ACAAGCATTT
2601	GAAAGAGCAT	CAGGCTCATG	TAGAAAATTT	AGAGGCAGAT	ATTAAAAGGT
2651	CTGAAGGGGA	ACTCCAGCAG	GCATCTGCTA	AGCTGGACGT	TTTTCAGTCT
2701		CCACACATGA	GCAGACAAAA	GCATATGAGG	AACAGTTGGC
2751	CCAATTGCAG			AACAGAAAGA	
2801	CCAAACAGGT			AGAAAGATGT	
2851		ACAAAATCCA			
2901	ACAAAATAGT	GAAATGGAGC	AAAAAGTAAA	ATCTTTAACC	CAAGTCTATG
2951		TGAAGATGGT			
3001	TTGGTGGAAA	AGGAAAATAT	GATTTTACAA	ATGAGAGAAG	GACAGAAGAA
3051		ATACTCACAC			
3101	ATATTTTGAA	TGAGGAATAT	GAAACCAAAT	TTAAAAACCA	AGAAAAAAG
3151	ATGGAAAAAG	TTAAGCAGAA	AGCAAAGGAG	ATGCAAGAAA	CGTTAAAGAA
3201	AAAATTACTG	GATCAGGAAG	CCAAACTTAA	GAAAGAGCTT	GAAAATACTG
3251	CTCTAGAGCT			TTAATGCCAA	
3301	ATGGCACAGG	CTAACTCAGC	TGGAATCAGT	GATGCAGTGT	CAAGACTGGA
3351	AACAAACCAA	AAAGAACAAA	TAGAAAGTCT	TACTGAGGTT	CATCGACGAG
3401	AACTCAATGA	TGTCATATCA	ATCTGGGAAA	AGAAACTTAA	TCAGCAAGCT
3451	GAAGAACTTC	AGGAAATACA	TGAAATCCAA	TTACAGGAAA	AAGAACAAGA
3501	GGTAGCAGAA	CTGAAACAAA	AGATCCTCCT	ATTTGGGTGT	GAAAAAGAAG
3551	AGATGAACAA	GGAAATAACA	TGGCTGAAGG	AAGAAGGTGT	TAAGCAGGAT
3601	ACAACATTAA	ATGAATTACA	GGAACAGTTA	AAGCAGAAGT	CTGCCCATGT
3651	GAATTCTCTT	GCACAAGATG	AAACTAAACT	GAAAGCTCAT	CTTGAAAAGC
3701	TAGAGGTTGA	CTTGAATAAG	TCTCTGAAGG	AAAATACTTT	TCTTCAAGAG
3751	CAGCTAGTTG	AACTGAAGAT	GCTGGCAGAA	GAAGATAAGC	GGAAGGTTTC
3801	TGAGTTGACT	AGCAAGTTGA	AAACCACAGA	TGAAGAATTC	CAGAGTTTGA
3851	AATCTTCACA	TGAAAAAAGT	AACAAAAGCC	TAGAGGACAA	GAGCTTGGAA
3901	TTTAAAAAAAC	TGTCTGAGGA	ACTAGCGATT	CAGCTAGATA	TTTGCTGTAA
3951	GAAAACCGAA	GCCTTATTAG	AAGCTAAAAC	AAATGAGCTA	ATCAACATTA
4001	GTAGTAGTAA	AACTAATGCC	ATTCTTTCTA	GGATTTCTCA	TTGTCAGCAC
4051	CGTACAACTA	AAGTTAAGGA	GGCACTGTTA	ATTAAAACTT	GCACAGTTTC
4101	TGAATTAGAA	GCACAACTTA	GACAGTTGAC	AGAGGAGCAA	AATACACTAA
4151	ATATTTCTTT	TCAACAGGCT	ACTCATCAGT	TAGAAGAAAA	AGAAAATCAA
4201	ATTAAGAGCA	TGAAGGCTGA	TATTGAAAGT		AAAAAGAAGC
4251	CTTACAGAAG	GAAGGAGGCA	ATCAGCAACA	GGCTGCTTCT	GAAAAGGAGT
4301	CTTGTATAAC	ACAGTTGAAG	AAAGAGTTAT	CTGAAAACAT	CAATGCTGTC
4351	ACATTGATGA	AAGAAGAGCT	TAAAGAAAAA	AAAGTTGAGA	TTAGCAGTCT
4401	TAGTAAACAA	CTAACTGATT	TGAATGTTCA	GCTTCAAAA1	AGCATCAGCC
4451	TATCCGAAAA	AGAAGCAGCC	ATTTCATCAC	TAAGAAAGCA	GTATGATGAA
4501	GAAAAATGTG	AATTGCTGGA	TCAGGTGCAA	GATTTATCTT	' TTAAAGTTGA
4551	CACTCTGAGT	AAAGAGAAAA	TTTCTGCTCT		GATGACTGGT
4601	CCAATAAATT	CTCAGAATGG	AAGAAGAAAG	CACAGTCAAG	ATTTACACAG
4651	CATCAAAACA	CTGTTAAAGA	ATTGCAGATC	CAGCTTGAGT	TAAAATCAAA
4701	GGAAGCTTAT	GAAAAGGATG	AGCAGATAAA	TTTATTGAAG	GAAGAGCTTG
4751	ATCAGCAAAA	TAAAAGATTT	GATTGTTTAA	AGGGTGAAAI	GGAAGACGAC
4801	AAGAGCAAGA	TGGAGAAAAA	GGAGTCTAAT	TTAGAAACAG	AGTTAAAGTC
4851	TCAAACAGCA	AGAATTATGG	AATTAGAGGA	CCATATTACC	CAGAAAACTA
4901	TTGAAATAGA	GTCCTTAAAT	GAAGTTCTTA	AAAATTACAA	TCAACAAAAG
4951	GATATTGAAC	ACAAAGAATT	GGTTCAGAAA	CTTCAACATT	TTCAAGAGTT
5001	AGGAGAAGAA	AAGGACAACA	GGGTTAAAGA	AGCTGAAGAA	AAAATCTTAA
5051	CACTTGAAAA	CCAAGTTTAT	TCCATGAAAG	CTGAACTTGA	AACTAAGAAG
5101	AAAGAATTAG	AACATGTGAA	TTTAAGTGTG	AAAAGCAAAG	AGGAGGAGTT
5151	AAAGGCATTC	GAAGATAGGC	TTGAGTCAGA	AAGTGCTGC	AAATTAGCAG
5201	AGTTGAAGAG	AAAAGCTGAA	CAAAAAATTO	CTGCCATTA	GAAGCAGTTG

WO 03/087403

-8/25-

			2 .5.		
5251	TTATCTCAAA	TGGAAGAGAA	AGAAGAACAG	TATAAAAAAG	GTACAGAAAG
5301	CCATTTGAGT	GAGCTAAATA	CAAAATTGCA	GGAAAGAGAA	AGGGAAGTTC
5351	ACATCTTGGA	AGAAAAACTT	AAGTCAGTGG	AAAGTTCACA	GTCAGAAACA
5401	TTAATTGTAC	CCAGATCAGC	AAAAAATGTG	GCAGCATATA	CTGAACAAGA
5451	AGAAGCAGAT	TCCCAAGGCT	GTGTGCAGAA	GACATATGAA	GAAAAAATCA
5501	GTGTTTTACA	AAGAAACTTA	ACTGAAAAAG	AAAAGCTATT	GCAGAGGGTA
5551		AAGAAGAGAC			
5601	ATACCAGGAG	CGCTTAATAA	AGCTAGAACA	TGCTGAGGCA	AAGCAACATG
5651	AAGATCAAAG	TATGATAGGT	CATCTTCAAG	AGGAGCTTGA	AGAAAAAAAC
5701	AAGAAATATT	CCTTGATAGT	AGCCCAGCAT	GTGGAAAAAG	AAGGAGGTAA
5751		CAGGCAAAGC			
5801		CCAGGAGAAG			
5851		TGGATTCCTG			
5901	TGAAATGGAA	GAGTTGACCT	CAAAATATGA	AAAATTACAG	GCTTTACAAC
5951		AAGAAATAAA			
6001		AATCACATTT			
6051	AGCCCAGCAC	AATGATCTGG	AGTTTAAATT	AGCCGGGGCA	GAACGGGAGA
6101	AACAGAAACT	GGGCAAGGAG	ATTGTTAGAT	TGCAGAAAGA	CCTTCGAATG
6151	TTGAGAAAGG	AGCATCAGCA	AGAATTGGAA	ATACTAAAGA	AAGAATATGA
6201	TCAAGAAAGG	GAAGAGAAAA	TCAAACAGGA	GCAGGAAGAT	CTTGAACTGA
6251		CACATTAAAA			
6301		AACAAGAGCT			
6351	GGCCCAGGAG	GTGGAGGCTG	AACTTTTAGA	AAGCCATCAA	GAAGAGACAA
6401		TAAAAAAATT			
6451	GCCAAAAGAT	ATGAAGAAAT	CCTTGATGCT	CGTGAAGAAG	AAATGACTGC
6501	AAAAGTAAGG	GACCTGCAGA	CTCAACTTGA	GGAGCTGCAG	AAGAAATACC
6551	AGCAAAAGCT	AGAGCAGGAG	GAGAACCCTG	GCAATGATAA	TGTAACAATT
6601	ATGGAGCTAC	AGACACAGCT	AGCACAGAAG	ACGACTTTAA	TCAGTGATTC
6651	GAAATTGAAA	GAGCAAGAGT	TCAGAGAACA	GATTCACAAT	TTAGAAGACC
6701	GTTTGAAGAA	ATATGAAAAG	AATGTATATG	CAACAACTGT	GGGGACACCT
6751	TACAAAGGTG	GCAATTTGTA	CCATACGGAT	GTCTCACTCT	TTGGAGAACC
6801	TACCGAATTT	GAGTATTTGC	GAAAAGTGCT	TTTTGAGTAT	ATGATGGGTC
6851	GTGAGACTAA	GACCATGGCA	AAAGTTATAA	CCACCGTACT	GAAGTTCCCT
6901	GATGATCAGA	CTCAGAAAAT	TTTGGAAAGA	GAAGATGCTC	GGCTGATGTC
6951	ATGGCTCCGA	TCTTCATCTT	GAAGAAGAGT	GACATTGGGT	GACTGCTGCT
7001	TGGAAAACTG	TCCACACTTG	CTACTCTTTG	AGAATGAAGT	TGTCATTCAG
7051	GGCCCCTCAT	GTAGCCAAAA	GACCAAGAAA	AATCTGGCCC	ACAGATAAGT
7101	TGCAGACTGC	CTTTAAAATA	GATTTTATCA	GTGGAGAAAT	GGTGATAGTT
7151	TTTTCTTCAG	TTTTCTCTTG	GGAAGAGTTT	TATGTTGTTT	AAAAGATATT
7201	TTGATAACTT	AACCTGCTTT	ATGGGCTTAC	ATAATATTCC	TTTCATCCAT
7251	TCTTTTTAAA	GAACGGCTTA	CCTTTCCTAT	TTATTTTAG	GGTGATTTTT
7301	TAAAAAGACT	TGTGCAATAC	ATTTTGAGGT	GAAACTTAGT	GGATTTTTTC
7351	TGATAAATTA	GAGCATTTAA	TTGACTATTT	TATTCAGGTT	GATCTGTTGA
7401	ATATTTGCTA	AAGACCAGTT	CTTTAAGCTA	AGACATGTAA	AAAATCCCAA
7451	ATGGCAGTAC	CTCATTGTTT	ACTTAGCTTT	TGTACTTATA	TTTTTCAGAG
7501	GAAAAAACAC	TACTGTAAAT	TGTGAATAGC	CAATACATAA	CTGTATTGTA
7551	TGCAAATCTG	TGATTGTTGG	CAGTGTCATC	TCTGAGAAAC	AGATAAATAA
7601	AGTTTATTTA	CTATATAACC	AAAAAAAAA	AAAAA	

2201

-9/25-

Fig. 7: SEQ ID NO. 4: amino acid sequence of human golgin-245, splice variant 2 (GenBank accession number Q13439)

Length: 2230 aa MFKKLKQKIS EEQQQLQQAL APAQASSNSS TPTRMRSRTS SFTEQLDEGT PNRESGDTQS FAQKLQLRVP SVESLFRSPI KESLFRSSSK ESLVRTSSRE 51 SLNRLDLDSS TASFDPPSDM DSEAEDLVGN SDSLNKEQLI QRLRRMERSL 101 SSYRGKYSEL VTAYQMLQRE KKKLQGILSQ SQDKSLRRIA ELREELQMDQ 151 QAKKHLQEEF DASLEEKDQY ISVLQTQVSL LKQRLRNGPM NVDVLKPLPQ 201 LEPQAEVFTK EENPESDGEP VVEDGTSVKT LETLQQRVKR QENLLKRCKE 251 TIQSHKEQCT LLTSEKEALQ EQLDERLQEL EKIKDLHMAE KTKLITQLRD 301 AKNLIEQLEQ DKGMVIAETK RQMHETLEMK EEEIAQLRSR IKQMTTQGEE 351 LREOKEKSER AAFEELEKAL STAQKTEEAR RKLKAEMDEQ IKTIEKTSEE 401 ERISLQQELS RVKQEVVDVM KKSSEEQIAK LQKLHEKELA RKEQELTKKL 451 QTREREFQEQ MKVALEKSQS EYLKISQEKE QQESLALEEL ELQKKAILTE 501 SENKLRDLQQ EAETYRTRIL ELESSLEKSL QENKNQSKDL AVHLEAEKNK 551 HNKEITVMVE KHKTELESLK HQQDALWTEK LQVLKQQYQT EMEKLREKCE 601 QEKETLLKDK EIIFQAHIEE MNEKTLEKLD VKQTELESLS SELSEVLKAR 651 HKLEEELSVL KDQTDKMKQE LEAKMDEQKN HHQQQVDSII KEHEVSIQRT 701 EKALKDQINQ LELLLKERDK HLKEHQAHVE NLEADIKRSE GELQQASAKL 751 DVFQSYQSAT HEQTKAYEEQ LAQLQQKLLD LETERILLTK QVAEVEAQKK 801 DVCTELDAHK IQVQDLMQQL EKQNSEMEQK VKSLTQVYES KLEDGNKEQE 851 OTKOILVEKE NMILOMREGO KKEIEILTOK LSAKEDSIHI LNEEYETKFK 901 NQEKKMEKVK QKAKEMQETL KKKLLDQEAK LKKELENTAL ELSQKEKQFN 951 AKMLEMAQAN SAGISDAVSR LETNQKEQIE SLTEVHRREL NDVISIWEKK 1001 LNQQAEELQE IHEIQLQEKE QEVAELKQKI LLFGCEKEEM NKEITWLKEE 1051 GVKQDTTLNE LQEQLKQKSA HVNSLAQDET KLKAHLEKLE VDLNKSLKEN 1101 TFLQEQLVEL KMLAEEDKRK VSELTSKLKT TDEEFQSLKS SHEKSNKSLE 1151 DKSLEFKKLS EELAIQLDIC CKKTEALLEA KTNELINISS SKTNAILSRI 1201 SHCQHRTTKV KEALLIKTCT VSELEAQLRQ LTEEQNTLNI SFQQATHQLE 1251 EKENQIKSMK ADIESLVTEK EALQKEGGNQ QQAASEKESC ITQLKKELSE 1301 NINAVTLMKE ELKEKKVEIS SLSKQLTDLN VQLQNSISLS EKEAAISSLR 1351 KQYDEEKCEL LDQVQDLSFK VDTLSKEKIS ALEQVDDWSN KFSEWKKKAQ 1401 SRFTQHQNTV KELQIQLELK SKEAYEKDEQ INLLKEELDQ QNKRFDCLKG 1451 EMEDDKSKME KKESNLETEL KSQTARIMEL EDHITQKTIE IESLNEVLKN 1501 YNOOKDIEHK ELVQKLQHFQ ELGEEKDNRV KEAEEKILTL ENQVYSMKAE 1551 LETKKKELEH VNLSVKSKEE ELKALEDRLE SESAAKLAEL KRKAEQKIAA 1601 IKKQLLSQME EKEEQYKKGT ESHLSELNTK LQEREREVHI LEEKLKSVES 1651 SQSETLIVPR SAKNVAAYTE QEEADSQGCV QKTYEEKISV LQRNLTEKEK 1701 LLQRVGQEKE ETVSSHFEMR CQYQERLIKL EHAEAKQHED QSMIGHLQEE 1751 LEEKNKKYSL IVAQHVEKEG GKNNIQAKQN LENVFDDVQK TLQEKELTCQ 1801 ILEQKIKELD SCLVRQKEVH RVEMEELTSK YEKLQALQQM DGRNKPTELL 1851 EENTEEKSKS HLVQPKLLSN MEAQHNDLEF KLAGAEREKQ KLGKEIVRLQ 1901 KDLRMLRKEH QQELEILKKE YDQEREEKIK QEQEDLELKH NSTLKQLMRE 1951 FNTOLAQKEQ ELEMTIKETI NKAQEVEAEL LESHQEETNQ LLKKIAEKDD 2001 DLKRTAKRYE EILDAREEEM TAKVRDLQTQ LEELQKKYQQ KLEQEENPGN 2051 2101 DNVTIMELQT QLAQKTTLIS DSKLKEQEFR EQIHNLEDRL KKYEKNVYAT TVGTPYKGGN LYHTDVSLFG EPTEFEYLRK VLFEYMMGRE TKTMAKVITT 2151

VLKFPDDQTQ KILEREDARL MFTSPRSGIF

-10/25-

Fig. 8: SEQ ID NO. 5: nucleotide sequence of human golgin-245 cDNA, splice variant 2 (GenBank accession number U41740)

Length: 7695 bp

1	GCAACGAAGG	TACCATGGCC	${\tt GTTGTCGTCG}$	CCGCCGCGGC	TCCCGGGGCT
51	GGATGGGGGG	CCGAGGCCAG	CCAGTGGCAC	CCGGAAGAAA	GAGACGCGGC
101	GGCGGCGACG	CCGACACCCT	CAGGACGAGT	GTCCGGACTT	GCCCACAGCC
151	TCAAGGAGGA	GACGGCGAGG	CCCGGCCCCC	GCTGTCCCTG	GTGTAAAGAA
201	GTCGCCGTAG	CCGTCGCGGC	CGGGACTCCC	CGGGCTCTCG	CCCTTCAGGT
251	TTCGTTGACA	CTCAGGACCG	TACGTACGCT	GCGCCATGTT	CAAGAAACTG
301	AAGCAAAAGA	TCAGCGAGGA	GCAGCAGCAG	CTCCAGCAGG	CGCTGGCTCC
351	TGCTCAGGCG	TCCTCCAATT	CTTCAACACC	AACAAGAATG	AGGAGCAGGA
401	CATCTTCATT	TACAGAGCAA	CTTGATGAAG	GTACACCCAA	TAGAGAGTCA
451	GGTGACACAC	AGTCTTTTGC	ACAGAAGCTC	CAGCTCCGGG	TGCCCTCCGT
501	GGAGTCTTTG	TTTCGAAGTC	CGATAAAGGA	ATCTCTATTC	CGGTCTTCTT
551	CTAAAGAGTC	TTTGGTACGA	ACATCTTCCA	GAGAATCCCT	GAATCGACTT
601	GACCTGGACA	GTTCTACTGC	CAGTTTTGAT	CCACCCTCTG	ATATGGATAG
651	CGAGGCTGAA	GACTTGGTAG	GGAATTCAGA	CAGTCTCAAC	AAAGAACAGT
701	TGATTCAGCG	GTTGCGAAGA	ATGGAACGAA	GCTTAAGTAG	CTACAGGGGA
751	AAATATTCTG	AGCTTGTTAC	AGCTTATCAG	ATGCTTCAGA	GAGAGAAGAA
801	AAAGCTACAA	GGTATATTAA	GTCAGAGTCA	GGATAAATCA	CTTCGGAGAA
851	TAGCAGAATT	AAGAGAGGAG	CTCCAAATGG	ACCAGCAGGC	AAAGAAACAT
901	CTGCAAGAGG	AGTTTGATGC	ATCTTTAGAG	GAGAAAGATC	AGTATATCAG
951	TGTTCTCCAA	ACTCAGGTTT	CTCTACTGAA	ACAACGATTA	CGAAATGGCC
1001	CGATGAATGT	TGATGTACTG	AAACCACTTC	CTCAGCTGGA	ACCACAGGCT
1051	GAAGTCTTCA	CTAAAGAAGA	GAATCCAGAA	AGTGATGGAG	AGCCAGTAGT
1101	GGAAGATGGA	ACTTCTGTAA	AAACACTGGA	AACACTCCAG	CAAAGAGTGA
1151	AGCGTCAAGA	GAACCTACTT	AAGCGTTGTA	AGGAAACAAT	TCAGTCACAT
1201		GTACACTATT			
1251		AGACTTCAAG			
1301	CCGAGAAGAC	TAAACTTATC	ACTCAGTTGC	GTGATGCAAA	GAACTTAATT
1351	GAACAGCTTG	AACAAGATAA	GGGAATGGTA	ATCGCAGAGA	CAAAACGTCA
1401	GATGCATGAA	ACCCTGGAAA	TGAAAGAAGA	AGAAATTGCT	CAACTCCGTA
1451	GTCGCATCAA	ACAGATGACT	ACCCAGGGAG	AGGAATTACG	GGAACAGAAA
1501	GAAAAGTCCG	AAAGAGCTGC	TTTTGAGGAA	CTTGAAAAAG	CTTTGAGTAC
1551	AGCCCAAAAA	ACAGAGGAAG	CACGGAGAAA	ACTGAAGGCA	GAAATGGATG
1601	AACAAATAAA	AACTATCGAA	AAAACAAGTG	AGGAGGAACG	CATCAGTCTT
1651	CAACAGGAAT	TAAGTCGGGT	GAAACAGGAG	GTTGTTGATG	TAATGAAAAA
1701	ATCCTCAGAA	GAACAAATTG	CTAAGCTACA	GAAGCTTCAT	GAAAAGGAGC
1751	TGGCCAGAAA	AGAGCAGGAA	CTGACCAAGA	AGCTTCAGAC	CCGAGAAAGG
1801	GAATTTCAGG	AACAAATGAA	AGTAGCTCTT	GAAAAGAGTC	AATCAGAATA
1851	TTTGAAGATC	AGCCAAGAAA	AAGAACAGCA	AGAATCTTTG	GCCCTAGAAG
1901	AGTTAGAGTT	GCAGAAAAA	GCAATCCTCA	CAGAAAGTGA	AAATAAACTT
1951	CGGGACCTTC	AGCAAGAAGC	AGAGACTTAC	AGAACTAGAA	TTCTTGAATT
2001	GGAAAGTTCT	TTGGAAAAAA	GCTTACAAGA	AAACAAAAAT	CAGTCAAAAG
2051	ATTTGGCTGT	TCATCTGGAA	GCTGAAAAA	ATAAGCACAA	TAAGGAGATT
2101	ACAGTCATGG	TTGAAAAACA	CAAGACAGAA	TTGGAAAGCC	TTAAGCATCA
2151	GCAGGATGCC	CTTTGGACTG	AAAAACTCCA	AGTCTTAAAG	CAACAATATC
2201	AGACTGAAAT	GGAAAAACTT	AGGGAAAAGT	GTGAACAAGA	AAAAGAAACA
2251	TTGTTGAAAG	ACAAAGAGAT	TATCTTCCAG	GCCCACATAG	AAGAAATGAA
2301	TGAAAAGACT	TTAGAAAAGC	TTGATGTGAA	GCAAACAGAA	CTAGAATCAT
2351	TATCTTCTGA	ACTGTCAGAA	GTATTAAAAG	CCCGTCACAA	ACTAGAAGAG
2401	GAACTTTCTG	TTCTGAAAGA	TCAAACAGAT	AAAATGAAGC	AGGAATTAGA
2451	GGCCAAGATG	GATGAACAGA	AAAATCATCA	CCAGCAGCAA	GTTGACAGTA

-11/25-

2501	TCATTAAAGA	ACACGAGGTA	TCTATCCAGA	GGACTGAGAA	GGCATTAAAA
2551				AAGGAAAGGG	
2601	01 11 11 10 11 10 11 11	CAGGCTCATG		AGAGGCAGAT	
2651	CTGAAGGGGA	ACTCCAGCAG	GCATCTGCTA	AGCTGGACGT	TTTTCAGTCT
2701	TACCAGAGTG	CCACACATGA		GCATATGAGG	
2751	CCAATTGCAG	CAGAAGTTGT		AACAGAAAGA	
2801	CCAAACAGGT	TGCTGAAGTT	GAAGCACAAA		TTGTACTGAG
2851	TTAGATGCTC	ACAAAATCCA		TTAATGCAGC	
2901	ACAAAATAGT	GAAATGGAGC		ATCTTTAACC	
2951	AGTCCAAACT	TGAAGATGGT		AGGAACAGAC	
3001	TTGGTGGAAA	AGGAAAATAT		ATGAGAGAAG	
3051	AGAAATTGAG	ATACTCACAC	AGAAATTGTC	AGCCAAGGAG	GACAGTATTC
3101	ATATTTTGAA	TGAGGAATAT	0	TTAAAAACCA	
3151	ATGGAAAAAG	TTAAGCAGAA		ATGCAAGAAA	
3201	AAAATTACTG	GATCAGGAAG		GAAAGAGCTT	
3251	CTCTAGAGCT	TAGTCAGAAA	GAAAAACAGT	TTAATGCCAA	AATGCTGGAA
3301	ATGGCACAGG	CTAACTCAGC	TGGAATCAGT	GATGCAGTGT	CAAGACTGGA
3351	AACAAACCAA	AAAGAACAAA	TAGAAAGTCT	TACTGAGGTT	CATCGACGAG
3401				AGAAACTTAA	TCAGCAAGCT
3451				TTACAGGAAA	
3501	GGTAGCAGAA	CTGAAACAAA	AGATCCTCCT	ATTTGGGTGT	GAAAAAGAAG
3551			TGGCTGAAGG		TAAGCAGGAT
3601			GGAACAGTTA		CTGCCCATGT
3651			AAACTAAACT		CTTGAAAAGC
3701			TCTCTGAAGG		TCTTCAAGAG
3751			GCTGGCAGAA		GGAAGGTTTC
3801			AAACCACAGA		CAGAGTTTGA
3851			AACAAAAGCC		GAGCTTGGAA
3901	TTTAAAAAAC		ACTAGCGATT		
3951					ATCAACATTA
4001				GGATTTCTCA	
4051				ATTAAAACTT	
4101			GACAGTTGAC		
	ATATTTCTTT		ACTCATCAGT		AGAAAATCAA
4151	ATTAAGAGCA		TATTGAAAGT		AAAAAGAAGC
4201	CTTACAGAAG			GGCTGCTTCT	
4251	CTTGTATAAC		AAAGAGTTAT		
4301		ACAGIIGAAG	TANDACITAL	AAAGTTGAGA	TTAGCAGTCT
4351	ACALIGAIGA	ביים אבטבאטכני יייית אביים אייים	ጥርል ልጥርጥጥርል	CCTTCAAAAT	AGCATCAGCC
4401	TAGIAAACAA	ACAACIGATI	ראיידיינער י	TAAGAAAGCA	GTATGATGAA
4451		ACAMOUNTAIN A	TCACCTCCAA	CATTTATCT	TTAAAGTTGA
4501	GAAAAAIGIG	AAIIGCIGGA	TCAGGIGCAA	TGAGCAGGTA	GATGACTGGT
4551	CACTCIGAGI		. IIICIGCICI	CACACTCAAC	ATTTACACAG
4601	CCAATAAATT	CICAGAAIGG		CACACTCIAC	TAAAATCAAA
4651	CATCAAAACA	CIGITAAAGA	ATIGCAGAIC	THE THE THE TENT	GAAGAGCTTG
4701					GGAAGACGAC
4751	ATCAGCAAAA	TAAAAGATTI	GALIGILIAA	, www.cyyycyc	AGTTAAAGTC
4801	AAGAGCAAGA	AAAAAAAAAAA	A AUGULCIAAI	ている はいかい しょうしょう しょうしょう しょうしょう しょうしょ エスクススペイン しょうしょう しょう	CAGAAAACTA
4851	TCAAACAGCA	AGAATTATGG	· AATTAGAGGA	~ ~ CCWTWTTWC ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	TCAACAAAAG
4901	TIGAAATAGA	GICCITAAAI	GAAGITCITA	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	TTCAAGAGTT
4951	GATATTGAAC	ACAAAGAATI	GGTICAGAAA	YCCACYYCYI CIICWWCWII	11 CONONG 11
5001	AGGAGAAGAA	AAGGACAACA	T GGGTTAAAGA		AAAATCTTAA
5051	CACTIGAAAA	CCAAGTTTAT	TCCATGAAAG	· VYYYGGYYYG	AACTAAGAAG
5101	AAAGAA'I'I'AG	AACATGTGAA	TTTAAGTGTG	JAAAAJUAAAA 1	AGGAGGAGTT
5151	AAAGGCATTG	GAAGATAGGC	TIGAGICAGA	AAGTGCTGCA	AAATTAGCAG

WO 03/087403 PCT/EP03/03958

-12/25-

5201	AGTTGAAGAG	AAAAGCTGAA	CAAAAAATTG	CTGCCATTAA	GAAGCAGTTG
5251	TTATCTCAAA	TGGAAGAGAA	AGAAGAACAG	TATAAAAAAG	GTACAGAAAG
5301	CCATTTGAGT	GAGCTAAATA	CAAAATTGCA	GGAAAGAGAA	AGGGAAGTTC
5351	ACATCTTGGA	AGAAAAACTT	AAGTCAGTGG	AAAGTTCACA	GTCAGAAACA
5401	TTAATTGTAC	CCAGATCAGC	AAAAAATGTG	GCAGCATATA	CTGAACAAGA
5451	AGAAGCAGAT	TCCCAAGGCT	GTGTGCAGAA	GACATATGAA	GAAAAAATCA
5501	GTGTTTTACA	AAGAAACTTA	ACTGAAAAAG	AAAAGCTATT	GCAGAGGGTA
5551	GGGCAGGAAA	AAGAAGAGAC	AGTTTCTTCT	CATTTTGAAA	TGCGATGCCA
5601		${\tt CGCTTAATAA}$	AGCTAGAACA	TGCTGAGGCA	AAGCAACATG
5651		TATGATAGGT		AGGAGCTTGA	
5701			AGCCCAGCAT		
5751			AAAACTTGGA		
5801	AGAAAACCCT	CCAGGAGAAG		GTCAGATTTT	
5851		TGGATTCCTG		CAGAAAGAAG	
5901		GAGTTGACCT			GCTTTACAAC
5951	AGATGGATGG	AAGAAATAAA	CCCACAGAAC		AAACACTGAA
6001	GAAAAGTCCA	AATCACATTT	GGTCCAACCC	AAATTGCTTA	GTAACATGGA
6051	AGCCCAGCAC	AATGATCTGG	AGTTTAAATT	AGCCGGGGCA	GAACGGGAGA
6101	AACAGAAACT	GGGCAAGGAG	ATTGTTAGAT	TGCAGAAAGA	CCTTCGAATG
6151	TTGAGAAAGG	AGCATCAGCA	AGAATTGGAA	ATACTAAAGA	AAGAATATGA
6201	TCAAGAAAGG	GAAGAGAAAA	TCAAACAGGA	GCAGGAAGAT	CTTGAACTGA
6251	AGCACAATTC	CACATTAAAA	CAGCTGATGA	GGGAGTTTAA	TACACAGCTG
6301	GCACAAAAGG	AACAAGAGCT	GGAAATGACC	ATAAAAGAAA	CTATCAATAA
6351	GGCCCAGGAG	GTGGAGGCTG	AACTTTTAGA	AAGCCATCAA	GAAGAGACAA
6401	ATCAGTTACT	TTAAAAAATT	GCTGAGAAAG	ATGATGATCT	AAAACGAACA
6451	GCCAAAAGAT	ATGAAGAAAT	CCTTGATGCT	CGTGAAGAAG	AAATGACTGC
6501	AAAAGTAAGG	GACCTGCAGA	CTCAACTTGA	GGAGCTGCAG	AAGAAATACC
6551	AGCAAAAGCT	AGAGCAGGAG	GAGAACCCTG	GCAATGATAA	TGTAACAATT
6601	ATGGAGCTAC	AGACACAGCT	AGCACAGAAG	ACGACTTTAA	TCAGTGATTC
6651	GAAATTGAAA	GAGCAAGAGT	TCAGAGAACA	GATTCACAAT	TTAGAAGACC
6701	GTTTGAAGAA	ATATGAAAAG	AATGTATATG	CAACAACTGT	GGGGACACCT
6751	TACAAAGGTG	GCAATTTGTA	CCATACGGAT	GTCTCACTCT	TTGGAGAACC
6801		GAGTATTTGC			
6851	GTGAGACTAA	GACCATGGCA	AAAGTTATAA	CCACCGTACT	GAAGTTCCCT
6901		CTCAGAAAAT			
6951	TACTTCACCT		TCTTCTGAGT		
7001	GTTAACATGT	GTCATGGCTC			AGTGACATTG
7051	GGTGACTGCT	GCTTGGAAAA	CTGTCCACAC	TTGCTACTCT	TTGAGAATGA
7101	AGTTGTCATT	CAGGGCCCCT	CATGTAGCCA	AAAGACCAAG	AAAAATCTGG
7151	CCCACAGATA	AGTTGCAGAC	TGCCTTTAAA	ATAGATTTTA	TCAGTGGAGA
7201	AATGGTGATA	GTTTTTTCTT	CAGTTTTCTC	TTGGGAAGGA	GTTTTATGTT
7251	GTTTAAAAGA	TATTTTGATA	ACTTAACCTG	CTTTATGGGC	TTACATAATA
7301	TTCCTTTCAT	CCATTCTTT	TAAAGAACGG	CTTACCTTTC	CTATTTATTT
7351	TTAGGGTGAT	TTTTTAAAAA	GACTTGTGCA	ATACATTTTC	AGGTGAAACT
7401	TAGTGGATTT	TTTCTGATAA	ATTAGAGCAT	TTAATTGACT	ATTTTATTCA
7451	GGTTGATCTG	TTGAATATTT	GCTAAAGACC	AGTTCTTTAA	GCTAAGACAT
7501	GTAAAAAATC	CCAAATGGCA	GTACCTCATI	GTTTACTTAG	CTTTTGTACT
7551	TATATTTTTC	AGAGGAAAAA	ACACTACTGI	' AAATTGTGAA	TAGCCAATAC
7601	ATAACTGTAT	TGTATGCAAA	TCTGTGATTG	TTGGCAGTGT	CATCTCTGAG
7651	AAACAGATAA	ATAAAGTTTA	TTTACTATAA	AAAAAAAAA	AAAAG

-13/25-

Fig. 9: SEQ ID NO. 6:amino acid sequence of human golgin-245, splice variant 3

Length: 2250 aa

	Ecilgiii macc a	_			
1	MFKKLKQKIS	EEQQQLQQAL	APAQASSNSS	TPTRMRSRTS	SFTEQLDEGT
51	PNRENASTHA	SKSPDSVNGS	EPSIPQSGDT	QSFAQKLQLR	VPSVESLFRS
101	PIKESLFRSS	SKESLVRTSS	RESLNRLDLD	SSTASFDPPS	DMDSEAEDLV
151	GNSDSLNKEQ	LIQRLRRMER	SLSSYRGKYS	ELVTAYQMLQ	REKKKLQGIL
201	SQSQDKSLRR	IAELREELQM	DQQAKKHLQE	EFDASLEEKD	QYISVLQTQV
251	SLLKQRLRNG	PMNVDVLKPL	PQLEPQAEVF	TKEENPESDG	EPVVEDGTSV
301	KTLETLQQRV	KRQENLLKRC	KETIQSHKEQ	CTLLTSEKEA	LQEQLDERLQ
351	ELEKIKDLHM	AEKTKLITQL	RDAKNLIEQL	EQDKGMVIAE	TKRQMHETLE
401	MKEEEIAQLR	SRIKQMTTQG	EELREQKEKS	ERAAFEELEK	ALSTAQKTEE
451	ARRKLKAEMD	EQIKTIEKTS	EEERISLQQE	LSRVKQEVVD	VMKKSSEEQI
501	AKLQKLHEKE	LARKEQELTK	KLQTREREFQ	EQMKVALEKS	QSEYLKISQE
551	KEQQESLALE	ELELQKKAIL	TESENKLRDL	QQEAETYRTR	ILELESSLEK
601	SLQENKNQSK	DLAVHLEAEK	NKHNKEITVM	VEKHKTELES	LKHQQDALWT
651	EKLQVLKQQY	QTEMEKLREK	CEQEKETLLK	DKEIIFQAHI	EEMNEKTLEK
701	LDVKQTELES	LSSELSEVLK	ARHKLEEELS	VLKDQTDKMK	QELEAKMDEQ
751	KNHHQQQVDS	IIKEHEVSIQ	RTEKALKDQI	NQLELLLKER	DKHLKEHQAH
801	VENLEADIKR	SEGELQQASA	KLDVFQSYQS	ATHEQTKAYE	EQLAQLQQKL
851	LDLETERILL	TKQVAEVEAQ	KKDVCTELDA	HKIQVQDLMQ	QLEKQNSEME
901	QKVKSLTQVY	ESKLEDGNKE	QEQTKQILVE	KENMILQMRE	GQKKEIEILT
951	QKLSAKEDSI	HILNEEYETK	FKNQEKKMEK	VKQKAKEMQE	TLKKKLLDQE
1001	AKLKKELENT	ALELSQKEKQ	FNAKMLEMAQ	ANSAGISDAV	SRLETNQKEQ
1051	IESLTEVHRR	ELNDVISIWE	KKLNQQAEEL	QEIHEIQLQE	KEQEVAELKQ
1101	KILLFGCEKE	EMNKEITWLK	EEGVKQDTTL	NELQEQLKQK	
1151	ETKLKAHLEK	LEVDLNKSLK	ENTFLQEQLV	ELKMLAEEDK	
1201	KTTDEEFQSL	KSSHEKSNKS	LEDKSLEFKK	LSEELAIQLD	ICCKKTEALL
1251	EAKTNELINI	SSSKTNAILS	RISHCQHRTT	KVKEALLIKT	CTVSELEAQL
1301	RQLTEEQNTL	NISFQQATHQ	LEEKENQIKS	MKADIESLVT	EKEALQKEGG
1351	NQQQAASEKE	SCITQLKKEL	SENINAVTLM	KEELKEKKVE	ISSLSKQLTD
1401	LNVQLQNSIS	LSEKEAAISS	LRKQYDEEKC	ELLDQVQDLS	FKVDTLSKEK
1451	ISALEQVDDW	SNKFSEWKKK	AQSRFTQHQN	TVKELQIQLE	LKSKEAYEKD
1501	EQINLLKEEL	DQQNKRFDCL	KGEMEDDKSK	MEKKESNLET	ELKSQTARIM
1551	ELEDHITQKT	IEIESLNEVL	KNYNQQKDIE	HKELVQKLQH	FQELGEEKDN
1601	RVKEAEEKIL	TLENQVYSMK	AELETKKKEL	EHVNLSVKSK	
1651	LESESAAKLA	ELKRKAEQKI	AAIKKQLLSQ		GTESHLSELN
1701	TKLQEREREV	HILEEKLKSV	ESSQSETLIV		TEQEEADSQG
1751	CVQKTYEEKI	SVLQRNLTEK	EKLLQRVGQE	KEETVSSHFE	MRCQYQERLI
1801	KLEHAEAKQH	EDQSMIGHLQ	EELEEKNKKY	SLIVAQHVEK	EGGKNNIQAK
1851	QNLENVFDDV	QKTLQEKELT	CQILEQKIKE		
1901	SKYEKLQALQ	QMDGRNKPTE	LLEENTEEKS	KSHLVQPKLL	
1951	EFKLAGAERE	KQKLGKEIVR	LQKDLRMLRK	EHQQELEILK	
2001	IKQEQEDLEL	KHNSTLKQLM	REFNTQLAQK	EQELEMTIKE	
2051	ELLESHQEET	NQLLKKIAEK	DDDLKRTAKR		
2101	TQLEELQKKY	QQKLEQEENP	GNDNVTIMEL		
2151	FREQIHNLED		ATTVGTPYKG		
2201	RKVLFEYMMG	RETKTMAKVI	TTVLKFPDDQ	TQKILEREDA	RLMSWLRSSS

PCT/EP03/03958

10/511096

 $\int_{\mathbb{R}^{N}} \frac{1}{\sqrt{2}} \left(\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} \right) dx = \frac{1}{\sqrt{2}} \left(\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} \right) \left(\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} \right) dx$

-14/25- 10/511096 Fig. 10: SEQ ID NO. 7: nucleotide sequence of human golgin-245 cDNA, splice variant 3

Leng	th: 7743 bp				
1	GCAACGAAGG	TACCATGGCC	GTTGTCGTCG	CCGCCGCGGC	TCCCGGGGCT
51	GGATGGGGGG		CCAGTGGCAC		GAGACGCGGC
101	GGCGGCGACG	CCGACACCCT	CAGGACGAGT	GTCCGGACTT	GCCCACAGCC
151	TCAAGGAGGA	GACGGCGAGG	CCCGGCCCCC	GCTGTCCCTG	GTGTAAAGAA
201	GTCGCCGTAG	CCGTCGCGGC	CGGGACTCCC	CGGGCTCTCG	CCCTTCAGGT
251	TTCGTTGACA	CTCAGGACCG	TACGTACGCT	GCGCCATGTT	CAAGAAACTG
301	AAGCAAAAGA	TCAGCGAGGA	GCAGCAGCAG	CTCCAGCAGG	CGCTGGCTCC
351	TGCTCAGGCG	TCCTCCAATT	CTTCAACACC	AACAAGAATG	AGGAGCAGGA
401	CATCTTCATT	TACAGAGCAA	CTTGATGAAG	GTACACCCAA	TAGAGAGAAT
451	GCATCTACTC	ATGCCTCGAA	ATCTCCTGAC	AGTGTTAATG	GAAGTGAACC
501	AAGCATTCCT	CAGTCAGGTG	ACACACAGTC	TTTTGCACAG	AAGCTCCAGC
551	TCCGGGTGCC	CTCCGTGGAG	TCTTTGTTTC	GAAGTCCGAT	AAAGGAATCT
601	CTATTCCGGT	CTTCTTCTAA	AGAGTCTTTG	GTACGAACAT	CTTCCAGAGA
651	ATCCCTGAAT	CGACTTGACC	TGGACAGTTC	TACTGCCAGT	TTTGATCCAC
701	CCTCTGATAT	GGATAGCGAG	GCTGAAGACT	TGGTAGGGAA	TTCAGACAGT
751	CTCAACAAAG	AACAGTTGAT	TCAGCGGTTG	CGAAGAATGG	AACGAAGCTT
801	AAGTAGCTAC	AGGGGAAAAT	ATTCTGAGCT	TGTTACAGCT	TATCAGATGC
851	TTCAGAGAGA	GAAGAAAAAG	CTACAAGGTA	TATTAAGTCA	GAGTCAGGAT
901	AAATCACTTC	GGAGAATAGC	AGAATTAAGA	GAGGAGCTCC	AAATGGACCA
951	GCAGGCAAAG	AAACATCTGC	AAGAGGAGTT	TGATGCATCT	TTAGAGGAGA
1001	AAGATCAGTA		CTCCAAACTC	AGGTTTCTCT	ACTGAAACAA
1051	CGATTACGAA	ATGGCCCGAT	GAATGTTGAT	GTACTGAAAC	CACTTCCTCA
1101		CAGGCTGAAG	TCTTCACTAA	AGAAGAGAAT	CCAGAAAGTG
1151	ATGGAGAGCC		GATGGAACTT	CTGTAAAAAC	ACTGGAAACA
1201		GAGTGAAGCG	TCAAGAGAAC	CTACTTAAGC	GTTGTAAGGA
1251	AACAATTCAG		AACAATGTAC	ACTATTAACT	AGTGAAAAAG
1301	AAGCTCTGCA	AGAACAACTG	GATGAAAGAC	TTCAAGAACT	AGAAAAGATA
1351	AAGGACCTTC	ATATGGCCGA	GAAGACTAAA	CTTATCACTC	AGTTGCGTGA
1401	TGCAAAGAAC	TTAATTGAAC	AGCTTGAACA	AGATAAGGGA	ATGGTAATCG
1451	CAGAGACAAA	ACGTCAGATG	CATGAAACCC	TGGAAATGAA	AGAAGAAGAA
1501	ATTGCTCAAC	TCCGTAGTCG	CATCAAACAG	ATGACTACCC	AGGGAGAGGA
1551	ATTACGGGAA	CAGAAAGAAA	AGTCCGAAAG	AGCTGCTTTT	GAGGAACTTG
1601	AAAAAGCTTT	GAGTACAGCC	CAAAAAACAG	AGGAAGCACG	GAGAAAACTG
1651	AAGGCAGAAA	TGGATGAACA	AATAAAAACT	ATCGAAAAAA	CAAGTGAGGA
1701	GGAACGCATC	AGTCTTCAAC	AGGAATTAAG	TCGGGTGAAA	CAGGAGGTTG
1751	TTGATGTAAT		TCAGAAGAAC		GCTACAGAAG
1801	CTTCATGAAA	AGGAGCTGGC	CAGAAAAGAG	CAGGAACTGA	CCAAGAAGCT
1851				AATGAAAGTA	
1901				AAGAAAAAGA	
1951				AAAAAAGCAA	
2001				AGAAGCAGAG	
2051				AAAAAAGCTT	
2101				CTGGAAGCTG	
2151				AAAACACAAG	
2201	AAAGCCTTAA	GCATCAGCAG	GATGCCCTTT	GGACTGAAAA	ACTCCAAGTC
2251	TTAAAGCAAC	AATATCAGAC	TGAAATGGAA	AAACTTAGGG	AAAAGTGTGA
2301				AGAGATTATC	
2351				AAAAGCTTGA	
2401				TCAGAAGTAT	
2451	TCACAAACTA	GAAGAGGAAC	TTTCTGTTCT	GAAAGATCAA	ACAGATAAAA
2501	TGAAGCAGGA	ATTAGAGGCC	AAGATGGATG	AACAGAAAAA	TCATCACCAG

-15/25-

2551				GAGGTATCTA	
2601				ACTTGAGCTT	
2651	AAAGGGACAA	GCATTTGAAA	GAGCATCAGG	CTCATGTAGA	AAATTTAGAG
2701		AAAGGTCTGA			CTGCTAAGCT
2751				ACATGAGCAG	
2801	ATGAGGAACA			AGTTGTTGGA	
2851	GAAAGAATTC			GAAGTTGAAG	
2901	AGATGTTTGT			AATCCAGGTG	
2951	TGCAGCAACT			TGGAGCAAAA	
3001	TTAACCCAAG	TCTATGAGTC	${\tt CAAACTTGAA}$	GATGGTAACA	AAGAACAGGA
3051	ACAGACAAAG	CAAATCTTGG	TGGAAAAGGA	AAATATGATT	TTACAAATGA
3101		GAAGAAAGAA		TCACACAGAA	
3151	AAGGAGGACA	GTATTCATAT	${\tt TTTGAATGAG}$	GAATATGAAA	CCAAATTTAA
3201	AAACCAAGAA	AAAAAGATGG	AAAAAGTTAA	GCAGAAAGCA	AAGGAGATGC
3251	AAGAAACGTT	AAAGAAAAAA	TTACTGGATC	AGGAAGCCAA	ACTTAAGAAA
3301		ATACTGCTCT		CAGAAAGAAA	AACAGTTTAA
3351	TGCCAAAATG	CTGGAAATGG	CACAGGCTAA	CTCAGCTGGA	ATCAGTGATG
3401	CAGTGTCAAG	ACTGGAAACA	AACCAAAAAG	AACAAATAGA	AAGTCTTACT
3451	GAGGTTCATC	GACGAGAACT	CAATGATGTC	ATATCAATCT	GGGAAAAGAA
3501	ACTTAATCAG	CAAGCTGAAG	AACTTCAGGA	AATACATGAA	ATCCAATTAC
3551	AGGAAAAAGA	ACAAGAGGTA	GCAGAACTGA	AACAAAAGAT	CCTCCTATTT
3601				ATAACATGGC	
3651	AGGTGTTAAG	CAGGATACAA	CATTAAATGA	ATTACAGGAA	CAGTTAAAGC
3701	AGAAGTCTGC	CCATGTGAAT	TCTCTTGCAC	AAGATGAAAC	TAAACTGAAA
3751	GCTCATCTTG	AAAAGCTAGA	GGTTGACTTG	AATAAGTCTC	TGAAGGAAAA
3801		CAAGAGCAGC		GAAGATGCTG	
3851	ATAAGCGGAA	GGTTTCTGAG	TTGACTAGCA	AGTTGAAAAC	CACAGATGAA
3901		GTTTGAAATC	TTCACATGAA	AAAAGTAACA	AAAGCCTAGA
3951	GGACAAGAGC	TTGGAATTTA	AAAAACTGTC	TGAGGAACTA	GCGATTCAGC
4001	TAGATATTTG	CTGTAAGAAA	ACCGAAGCCT	TATTAGAAGC	TAAAACAAAT
4051	GAGCTAATCA	ACATTAGTAG	TAGTAAAACT	AATGCCATTC	TTTCTAGGAT
4101	TTCTCATTGT	CAGCACCGTA	CAACTAAAGT	TAAGGAGGCA	CTGTTAATTA
4151	AAACTTGCAC	AGTTTCTGAA	TTAGAAGCAC	AACTTAGACA	GTTGACAGAG
4201	GAGCAAAATA	CACTAAATAT	TTCTTTTCAA	CAGGCTACTC	ATCAGTTAGA
4251	AGAAAAAGAA	AATCAAATTA	AGAGCATGAA	GGCTGATATT	GAAAGTCTTG
4301	TAACAGAAAA	AGAAGCCTTA	CAGAAGGAAG	GAGGCAATCA	GCAACAGGCT
4351				TTGAAGAAAG	
4401	AAACATCAAT	GCTGTCACAT	TGATGAAAGA	AGAGCTTAAA	GAAAAAAAAG
4451	TTGAGATTAG	CAGTCTTAGT	AAACAACTAA	CTGATTTGAA	TGTTCAGCTT
4501	CAAAATAGCA	TCAGCCTATC	CGAAAAAGAA	GCAGCCATTT	CATCACTAAG
4551	AAAGCAGTAT	GATGAAGAAA	AATGTGAATT	GCTGGATCAG	GTGCAAGATT
4601	TATCTTTTAA	AGTTGACACT	CTGAGTAAAG	AGAAAATTTC	TGCTCTTGAG
4651	CAGGTAGATG	ACTGGTCCAA	TAAATTCTCA	GAATGGAAGA	AGAAAGCACA
4701	GTCAAGATTT	ACACAGCATC	AAAACACTGT	TAAAGAATTG	CAGATCCAGC
4751	TTGAGTTAAA	ATCAAAGGAA	GCTTATGAAA	AGGATGAGCA	GATAAATTTA
4801	TTGAAGGAAG	AGCTTGATCA	GCAAAATAAA	AGATTTGATT	GTTTAAAGGG
4851	TGAAATGGAA	GACGACAAGA	GCAAGATGGA	GAAAAAGGAG	TCTAATTTAG
4901	AAACAGAGTT	AAAGTCTCAA	ACAGCAAGAA	TTATGGAATT	AGAGGACCAT
4951	ATTACCCAGA	AAACTATTGA	AATAGAGTCC	TTAAATGAAG	TTCTTAAAAA
5001	TTACAATCAA	CAAAAGGATA	TTGAACACAA	AGAATTGGTT	CAGAAACTTC
5051	AACATTTTCA	AGAGTTAGGA	GAAGAAAAGG	ACAACAGGGT	TAAAGAAGCT
5101	GAAGAAAAAA	TCTTAACACT	TGAAAACCAA	GTTTATTCCA	TGAAAGCTGA
5151	ACTTGAAACT	' AAGAAGAAAG	AATTAGAACA	TGTGAATTTA	AGTGTGAAAA
5201	GCAAAGAGGA	GGAGTTAAAG	GCATTGGAAG	ATAGGCTTGA	GTCAGAAAGT

-16/25-

			~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	አ አ አምምርርምርር
5251		TAGCAGAGTT	CTCAAATGGA	ACACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	CANCACTATA
5301	CATTAAGAAG		TTGAGTGAGC		
5351	AAAAAGGTAC		CTTGGAAGAA		
5401	AGAGAAAGGG	GAAACATTAA			
5451	TTCACAGTCA	ACAAGAAGAA	CONCINE	ATCAGCAAAA	CCACAACACA
5501				AAGGCTGTGT	
5551	TATGAAGAAA		AGGAAAAAGA		
5601	GCTATTGCAG				
5651		ATGCCAATAC			
5701		AACATGAAGA			
5751	GCTTGAAGAA	AAAAACAAGA	AATATTCCTT	GATAGTAGCC	CAGCAIGIGG
5801	AAAAAGAAGG	AGGTAAAAAT	AACATACAGG	da Ca a CCa a C	CIIGGWWWT
5851	GTGTTTGACG	ACGTCCAGAA	AACCCTCCAG	GAGAAGGAAC	CENTRACTICA
5901	GATTTTGGAG	CAAAAGATAA	AAGAGCTGGA	TTCCTGCTTA	GIAAGACAGA
5951	AAGAAGTACA	TAGAGTTGAA	ATGGAAGAGT	TGACCTCAAA	ATATGAAAAA
6001	TTACAGGCTT	TACAACAGAT	GGATGGAAGA	AATAAACCCA	CAGAACTTTT
6051	GGAAGAAAAC	ACTGAAGAAA	AGTCCAAATC	ACATTTGGTC	CAACCCAAAT
6101	TGCTTAGTAA	CATGGAAGCC	CAGCACAATG	ATCTGGAGTT	TAAATTAGCC
6151	GGGGCAGAAC	GGGAGAAACA	GAAACTGGGC	AAGGAGATTG	TTAGATTGCA
6201	GAAAGACCTT	CGAATGTTGA	GAAAGGAGCA	TCAGCAAGAA	TTGGAAATAC
6251	TAAAGAAAGA	ATATGATCAA	GAAAGGGAAG	AGAAAATCAA	ACAGGAGCAG
6301	GAAGATCTTG	AACTGAAGCA	CAATTCCACA	TTAAAACAGC	TGATGAGGGA
6351	GTTTAATACA	CAGCTGGCAC	AAAAGGAACA	AGAGCTGGAA	ATGACCATAA
6401	AAGAAACTAT	CAATAAGGCC	CAGGAGGTGG	AGGCTGAACT	TTTAGAAAGC
6451					AGAAAGATGA
6501	TGATCTAAAA	CGAACAGCCA	AAAGATATGA	AGAAATCCTT	GATGCTCGTG
6551	AAGAAGAAAT	GACTGCAAAA	GTAAGGGACC		ACTTGAGGAG
6601	CTGCAGAAGA	AATACCAGCA	AAAGCTAGAG	CAGGAGGAGA	ACCCTGGCAA
6651	TGATAATGTA	ACAATTATGG	AGCTACAGAC	ACAGCTAGCA	CAGAAGACGA
6701	CTTTAATCAG	TGATTCGAAA	TTGAAAGAGC	AAGAGTTCAG	AGAACAGATT
6751	CACAATTTAG	AAGACCGTTT	GAAGAAATAT	GAAAAGAATG	TATATGCAAC
6801	AACTGTGGGG	ACACCTTACA	AAGGTGGCAA	TTTGTACCAT	ACGGATGTCT
6851	CACTCTTTGG	AGAACCTACC			AGTGCTTTTT
6901	GAGTATATGA				TTATAACCAC
6951	CGTACTGAAG				GAAAGAGAAG
7001	ATGCTCGGCT	GATGTTTACT	TCACCTCGCA	GTGGTATCTT	CTGAGTAAAC
7051	CATCAGTCTG	TGCTTAGTTA	ACATGTGTCA	TGGCTCCGAT	CTTCATCTTG
7101	AAGAAGAGTG	ACATTGGGTG	ACTGCTGCTT	GGAAAACTGT	CCACACTTGC
7151	TACTCTTTGA	GAATGAAGTT	GTCATTCAGG	GCCCCTCATG	TAGCCAAAAG
7201	ACCAAGAAAA	ATCTGGCCCA	CAGATAAGTT	GCAGACTGCC	TTTAAAATAG
7251	ATTTTATCAG	TGGAGAAATG	GTGATAGTTT	TTTCTTCAGT	TTTCTCTTGG
7301	GAAGAGTTTT	ATGTTGTTTA	AAAGATATTT	TGATAACTTA	ACCTGCTTTA
7351	TGGGCTTACA	TAATATTCCT	TTCATCCATT	CTTTTTAAAG	AACGGCTTAC
7401	CTTTCCTATT	TATTTTTAGG	GTGATTTTT	AAAAAGACTT	GTGCAATACA
7451	TTTTGAGGTG	AAACTTAGTG	GATTTTTTCT	GATAAATTAG	AGCATTTAAT
7501	TGACTATTTT	ATTCAGGTTG	ATCTGTTGAA	TATTTGCTAA	AGACCAGTTC
7551	TTTAAGCTAA	GACATGTAAA	AAATCCCAAA	TGGCAGTACC	TCATTGTTTA
7601	СТТАССТТТТ	GTACTTATAT	TTTTCAGAGG	AAAAAACACT	ACTGTAAATT
7651	GTGAATAGCC	AATACATAAC	TGTATTGTAT	GCAAATCTGT	GATTGTTGGC
7701	AGTGTCATCT	CTGAGAAACA	GATAAATAAA	GTTTATTTAC	TAT

# -17/25Fig. 11: SEQ ID NO. 8: amino acid sequence of human golgin-245, splice variant 4

Length: 2252 aa

	Lengin: 2252 a	a			
1	MFKKLKQKIS	EEQQQLQQAL	APAQASSNSS	TPTRMRSRTS	
51	PNRENASTHA	SKSPDSVNGS	EPSIPQSGDT	QSFAQKLQLR	
101	PIKESLFRSS	SKESLVRTSS	RESLNRLDLD	SSTASFDPPS	DMDSEAEDLV
151	GNSDSLNKEQ	LIQRLRRMER	SLSSYRGKYS	ELVTAYQMLQ	REKKKLQGIL
201	SQSQDKSLRR	IAELREELQM	DQQAKKHLQE	EFDASLEEKD	QYISVLQTQV
251	SLLKQRLRNG	PMNVDVLKPL	PQLEPQAEVF	TKEENPESDG	EPVVEDGTSV
301	KTLETLQQRV	KRQENLLKRC	KETIQSHKEQ	CTLLTSEKEA	LQEQLDERLQ
351	ELEKIKDLHM	AEKTKLITQL	RDAKNLIEQL	EQDKGMVIAE	TKRQMHETLE
401	MKEEEIAQLR	-	EELREQKEKS	ERAAFEELEK	
451	ARRKLKAEMD	EQIKTIEKTS	EEERISLQQE	LSRVKQEVVD	VMKKSSEEQI
501	AKLQKLHEKE		KLQTREREFQ	EQMKVALEKS	QSEYLKISQE
551	KEQQESLALE		TESENKLRDL	QQEAETYRTR	ILELESSLEK
601	SLQENKNQSK		NKHNKEITVM	VEKHKTELES	LKHQQDALWT
651	EKLQVLKQQY		CEQEKETLLK	DKEIIFQAHI	EEMNEKTLEK
701	LDVKQTELES	LSSELSEVLK	ARHKLEEELS	VLKDQTDKMK	
751	KNHHQQQVDS	IIKEHEVSIQ	RTEKALKDQI	NQLELLLKER	DKHLKEHQAH
801	VENLEADIKR	SEGELQQASA	KLDVFQSYQS	ATHEQTKAYE	EQLAQLQQKL
851	LDLETERILL	TKQVAEVEAQ	KKDVCTELDA	HKIQVQDLMQ	QLEKQNSEME
901	QKVKSLTQVY	ESKLEDGNKE	QEQTKQILVE	KENMILQMRE	GQKKEIEILT
951	QKLSAKEDSI	HILNEEYETK	FKNQEKKMEK	VKQKAKEMQE	TLKKKLLDQE
1001	AKLKKELENT	ALELSQKEKQ	FNAKMLEMAQ	ANSAGISDAV	
1051	IESLTEVHRR	ELNDVISIWE	KKLNQQAEEL	QEIHEIQLQE	KEQEVAELKQ
1101	KILLFGCEKE	EMNKEITWLK	EEGVKQDTTL	NELQEQLKQK	SAHVNSLAQD
1151	ETKLKAHLEK	LEVDLNKSLK	ENTFLQEQLV	ELKMLAEEDK	
1201	KTTDEEFQSL	KSSHEKSNKS	LEDKSLEFKK		ICCKKTEALL
1251	EAKTNELINI	SSSKTNAILS	RISHCQHRTT	KVKEALLIKT	CTVSELEAQL
1301	RQLTEEQNTL	NISFQQATHQ	LEEKENQIKS	MKADIESLVT	EKEALQKEGG
1351	NQQQAASEKE	SCITQLKKEL			ISSLSKQLTD
1401	LNVQLQNSIS	LSEKEAAISS	LRKQYDEEKC	ELLDQVQDLS	FKVDTLSKEK
1451	ISALEQVDDW	SNKFSEWKKK			LKSKEAYEKD
1501	EQINLLKEEL	DQQNKRFDCL			ELKSQTARIM
1551	ELEDHITQKT	IEIESLNEVL		HKELVQKLQH	
1601	RVKEAEEKIL	TLENQVYSMK			
1651		ELKRKAEQKI			GTESHLSELN
1701			ESSQSETLIV		
1751					MRCQYQERLI
1801					EGGKNNIQAK
1851					VHRVEMEELT
1901					SNMEAQHNDL
1951					KEYDQEREEK
2001	IKQEQEDLEL	KHNSTLKQLM	REFNTQLAQK	EQELEMTIKE	TINKAQEVEA
2051					EMTAKVRDLQ
2101					ISDSKLKEQE
2151					FGEPTEFEYL
2201		RETKTMAKVI	TTVLKFPDDQ	TQKILEREDA	RLMFTSPRSG
2251	IF				

# -18/25 Fig. 12: SEQ ID NO. 9: nucleotide sequence of human golgin-245 cDNA, splice variant 4

Length: 7761 bp

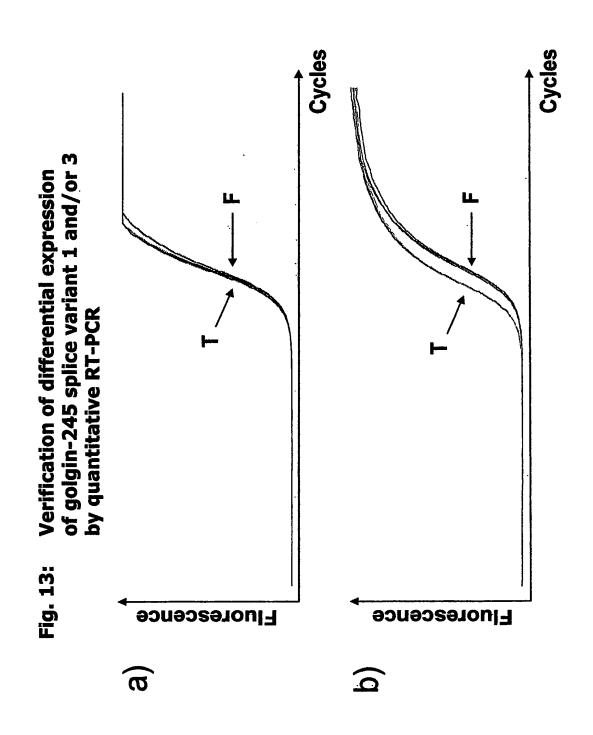
1	CCNNCGNACC	тассатессс	GTTGTCGTCG	CCGCCGCGGC	TCCCGGGGCT
51			CCAGTGGCAC		
101		CCGACACCCT		GTCCGGACTT	
151		GACGGCGAGG		GCTGTCCCTG	
201			CGGGACTCCC		
251			TACGTACGCT		
301			GCAGCAGCAG		
351	TGCTCAGGCG		CTTCAACACC		
401			CTTGATGAAG		
451			ATCTCCTGAC		
501		CAGTCAGGTG		TTTTGCACAG	
551			TCTTTGTTTC	GAAGTCCGAT	AAAGGAATCT
601			AGAGTCTTTG		
651		CGACTTGACC			TTTGATCCAC
701		GGATAGCGAG		TGGTAGGGAA	TTCAGACAGT
751	CTCAACAAAG	AACAGTTGAT	TCAGCGGTTG	CGAAGAATGG	AACGAAGCTT
801	AAGTAGCTAC	AGGGGAAAAT	ATTCTGAGCT	TGTTACAGCT	TATCAGATGC
851	TTCAGAGAGA	GAAGAAAAAG	CTACAAGGTA	TATTAAGTCA	GAGTCAGGAT
901	AAATCACTTC	GGAGAATAGC	AGAATTAAGA	GAGGAGCTCC	AAATGGACCA
951	GCAGGCAAAG	AAACATCTGC	AAGAGGAGTT	TGATGCATCT	TTAGAGGAGA
1001	AAGATCAGTA	TATCAGTGTT	CTCCAAACTC	AGGTTTCTCT	ACTGAAACAA
1051	CGATTACGAA	ATGGCCCGAT	GAATGTTGAT	GTACTGAAAC	CACTTCCTCA
1101	GCTGGAACCA	CAGGCTGAAG	TCTTCACTAA	AGAAGAGAAT	CCAGAAAGTG
1151	ATGGAGAGCC	AGTAGTGGAA	GATGGAACTT	CTGTAAAAAC	ACTGGAAACA
1201			TCAAGAGAAC		
1251			AACAATGTAC		
1301			GATGAAAGAC		
1351			GAAGACTAAA		
1401			AGCTTGAACA		
1451			CATGAAACCC		
1501			CATCAAACAG		
1551			AGTCCGAAAG		
1601			CAAAAAACAG		
1651			AATAAAAACT		CAAGTGAGGA
1701			AGGAATTAAG		CAGGAGGTTG
1751			TCAGAAGAAC		
1801			CAGAAAAGAG		
1851			TTCAGGAACA		
1901					ACAGCAAGAA
1951					TCCTCACAGA
2001					ACTTACAGAA
2051			AGTTCTTTGG		
2101					AAAAAAATAA
2151			TCATGGTTGA		
2201			GATGCCCTTT		
2251					AAAAGTGTGA
2301			TGAAAGACAA		
2351	ACATAGAAGA	AATGAATGAA	AAGACTTTAG	AAAAGCTTGA	TGTGAAGCAA
2401			TTCTGAACTG		
2451	TCACAAACTA	GAAGAGGAAC	TITCIGITCI	GHWWGWI CHA	ACAGATAAAA

## -19/25-

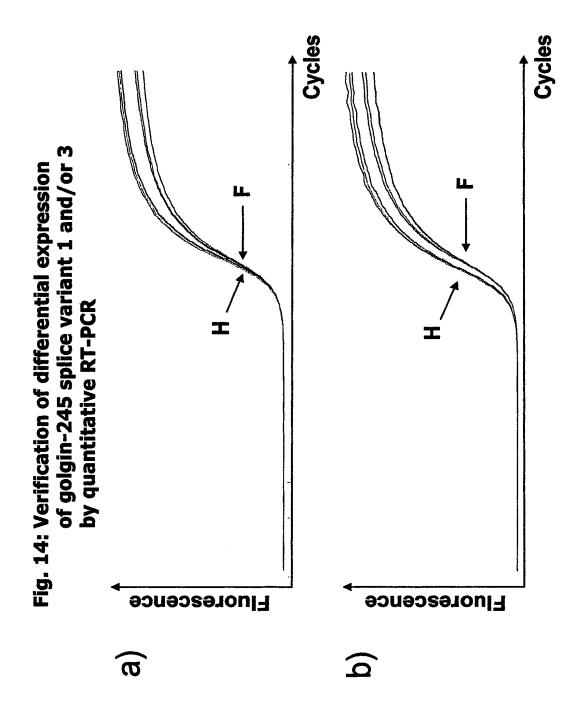
2501	TGAAGCAGGA	ATTAGAGGCC	AAGATGGATG	AACAGAAAAA	TCATCACCAG
2551			TAAAGAACAC		
2601	TGAGAAGGCA	TTAAAAGATC	AAATTAATCA	ACTTGAGCTT	CTCTTGAAGG
2651	AAAGGGACAA	GCATTTGAAA	GAGCATCAGG	CTCATGTAGA	AAATTTAGAG
2701		AAAGGTCTGA		CAGCAGGCAT	
2751	GGACGTTTTT		AGAGTGCCAC		
2801			TTGCAGCAGA		
2851	GAAAGAATTC		ACAGGTTGCT		
2901	AGATGTTTGT		ATGCTCACAA		
2951	TGCAGCAACT		AATAGTGAAA		
3001	TTAACCCAAG		CAAACTTGAA		
3051	ACAGACAAAG		TGGAAAAGGA		TTACAAATGA
3101		GAAGAAAGAA		TCACACAGAA	
3151	AAGGAGGACA		TTTGAATGAG		CCAAATTTAA
3201			AAAAAGTTAA	GCAGAAAGCA	
3251			TTACTGGATC		
3301	GAGCTTGAAA		AGAGCTTAGT		AACAGTTTAA
3351	TGCCAAAATG		CACAGGCTAA		ATCAGTGATG
3401			AACCAAAAAG		
3451	GAGGTTCATC	GACGAGAACT	CAATGATGTC		GGGAAAAGAA
3501		•	AACTTCAGGA		
			GCAGAACTGA		CCTCCTATTT
3551	GGGTGTGAAA			ATAACATGGC	TGAAGGAAGA
3601	AGGTGTTAAG		CATTAAATGA		CAGTTAAAGC
3651	AGAAGTCTGC	CCATGTGAAT	TCTCTTGCAC	ATTACAGGAA	TAAACTGAAA
3701				AATAAGTCTC	TGAAGGAAAA
3751	GCTCATCTTG				GCAGAAGAAG
3801	TACTTTTCTT	CAAGAGCAGC	TAGTTGAACT	GAAGATGCTG	
3851	ATAAGCGGAA	GGTTTCTGAG		AGTTGAAAAC	CACAGATGAA
3901	GAATTCCAGA	GTTTGAAATC		AAAAGTAACA	
3951	GGACAAGAGC		AAAAACTGTC		GCGATTCAGC
4001	TAGATATTTG		ACCGAAGCCT	TATTAGAAGC	TAAAACAAAT
4051		ACATTAGTAG		AATGCCATTC	TTTCTAGGAT
4101	TTCTCATTGT	CAGCACCGTA		TAAGGAGGCA	CTGTTAATTA
4151	AAACTTGCAC	AGTTTCTGAA			GTTGACAGAG
4201		CACTAAATAT	TTCTTTTCAA	CAGGCTACTC	ATCAGTTAGA
4251			AGAGCATGAA	GGCTGATATT	GAAAGTCTTG
4301		AGAAGCCTTA	•	GAGGCAATCA	GCAACAGGCT
4351		AGGAGTCTTG	TATAACACAG		AGTTATCTGA
4401			TGATGAAAGA		
4451			AAACAACTAA		
4501			CGAAAAAGAA		
4551			AATGTGAATT		
4601			CTGAGTAAAG		
4651			TAAATTCTCA		
4701			AAAACACTGT		
4751			GCTTATGAAA		
4801			GCAAAATAAA		
4851			GCAAGATGGA		
4901			ACAGCAAGAA		
4951			AATAGAGTCC		
5001			TTGAACACAA		
5051			GAAGAAAAGG		
5101			TGAAAACCAA		
5151	ACTTGAAACT	AAGAAGAAAG	AATTAGAACA	TGTGAATTTA	AGTGTGAAAA

### -20/25-

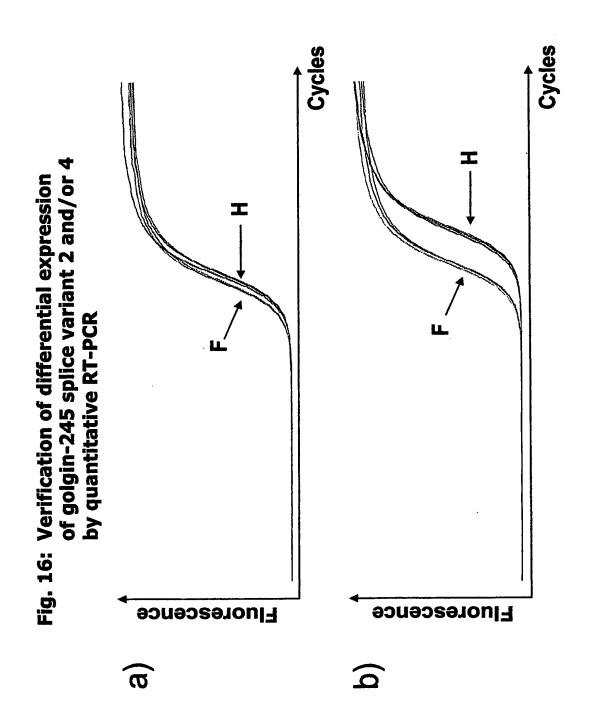
5201		GGAGTTAAAG			
5251		TAGCAGAGTT			
5301		CAGTTGTTAT			
5351		AGAAAGCCAT			
5401		AAGTTCACAT			
5451	TTCACAGTCA	GAAACATTAA	TTGTACCCAG	ATCAGCAAAA	AATGTGGCAG
5501	CATATACTGA	ACAAGAAGAA	GCAGATTCCC	AAGGCTGTGT	GCAGAAGACA
5551	TATGAAGAAA	AAATCAGTGT	TTTACAAAGA	AACTTAACTG	AAAAAGAAAA
5601	GCTATTGCAG	AGGGTAGGGC	AGGAAAAAGA	AGAGACAGTT	TCTTCTCATT
5651	TTGAAATGCG	ATGCCAATAC	CAGGAGCGCT	TAATAAAGCT	AGAACATGCT
5701	GAGGCAAAGC	AACATGAAGA	TCAAAGTATG	ATAGGTCATC	TTCAAGAGGA
5751	GCTTGAAGAA	AAAAACAAGA	AATATTCCTT	GATAGTAGCC	CAGCATGTGG
5801	AAAAAGAAGG	AGGTAAAAAT	AACATACAGG	CAAAGCAAAA	CTTGGAAAAT
5851	GTGTTTGACG	ACGTCCAGAA	AACCCTCCAG	GAGAAGGAAC	TAACCTGTCA
5901	GATTTTGGAG	CAAAAGATAA	AAGAGCTGGA	TTCCTGCTTA	GTAAGACAGA
5951	AAGAAGTACA	TAGAGTTGAA	ATGGAAGAGT	TGACCTCAAA	ATATGAAAAA
6001	TTACAGGCTT	TACAACAGAT	GGATGGAAGA	AATAAACCCA	CAGAACTTTT
6051	GGAAGAAAAC	ACTGAAGAAA	AGTCCAAATC	ACATTTGGTC	CAACCCAAAT
6101		CATGGAAGCC			
6151		GGGAGAAACA			
6201	GAAAGACCTT	CGAATGTTGA	GAAAGGAGCA	TCAGCAAGAA	TTGGAAATAC
6251	TAAAGAAAGA	ATATGATCAA	GAAAGGGAAG	AGAAAATCAA	ACAGGAGCAG
6301		AACTGAAGCA			
6351	GTTTAATACA	CAGCTGGCAC	AAAAGGAACA	AGAGCTGGAA	ATGACCATAA
6401		CAATAAGGCC			
6451	CATCAAGAAG	AGACAAATCA	GTTACTTAAA	AAAATTGCTG	AGAAAGATGA
6501		CGAACAGCCA			
6551	AAGAAGAAAT	GACTGCAAAA	GTAAGGGACC	TGCAGACTCA	ACTTGAGGAG
6601	CTGCAGAAGA	AATACCAGCA	AAAGCTAGAG	CAGGAGGAGA	ACCCTGGCAA
6651	TGATAATGTA	ACAATTATGG	AGCTACAGAC	ACAGCTAGCA	CAGAAGACGA
6701	CTTTAATCAG	TGATTCGAAA	TTGAAAGAGC	AAGAGTTCAG	AGAACAGATT
6751	CACAATTTAG	AAGACCGTTT	GAAGAAATAT	GAAAAGAATG	TATATGCAAC
6801	AACTGTGGGG	ACACCTTACA	AAGGTGGCAA	TTTGTACCAT	ACGGATGTCT
6851	CACTCTTTGG	AGAACCTACC	GAATTTGAGT	ATTTGCGAAA	AGTGCTTTTT
6901	GAGTATATGA	TGGGTCGTGA	GACTAAGACC	ATGGCAAAAG	TTATAACCAC
6951	CGTACTGAAG	TTCCCTGATG	ATCAGACTCA	GAAAATTTTG	GAAAGAGAAG
7001	ATGCTCGGCT	GATGTTTACT	TCACCTCGCA	GTGGTATCTT	CTGAGTAAAC
7051	CATCAGTCTG	TGCTTAGTTA	ACATGTGTCA	TGGCTCCGAT	CTTCATCTTG
7101		ACATTGGGTG			
7151		GAATGAAGTT			
7201	ACCAAGAAAA	ATCTGGCCCA	CAGATAAGTT	GCAGACTGCC	TTTAAAATAG
7251	ATTTTATCAG	TGGAGAAATG	GTGATAGTTT	TTTCTTCAGT	TTTCTCTTGG
7301	GAAGGAGTTT	TATGTTGTTT	AAAAGATATT	TTGATAACTT	AACCTGCTTT
7351	ATGGGCTTAC	ATAATATTCC	TTTCATCCAT	TCTTTTTAAA	GAACGGCTTA
7401	CCTTTCCTAT	TTATTTTTAG	GGTGATTTTT	TAAAAAGACT	TGTGCAATAC
7451	ATTTTGAGGT	GAAACTTAGT	GGATTTTTTC	TGATAAATTA	GAGCATTTAA
7501	TTGACTATTT	TATTCAGGTT	GATCTGTTGA	ATATTTGCTA	AAGACCAGTT
7551		AGACATGTAA			
7601	ACTTAGCTTT	TGTACTTATA	TTTTTCAGAG	GAAAAAACAC	TACTGTAAAT
7651	TGTGAATAGC	CAATACATAA	CTGTATTGTA	TGCAAATCTG	TGATTGTTGG
7701	CAGTGTCATC	TCTGAGAAAC	AGATAAATAA	AGTTTATTTA	CTATAAAAAA
7751	ААААААААА	G			



PCT/EP03/03958



Cycles of golgin-245 splice variant 2 and/or 4 by quantitative RT-PCR Fig. 15: Verification of differential expression Fluorescence Fluorescence <u>a</u> 9



-25/25-

labeled with anti-golgin-245 monoclonal Fig. 17: Images of the human cerebral cortex antibody and with DAPI **9** phase contrast B